

10/523,320

REMARKS

The drawings are objected to by the Examiner for the reasons noted in the official action, e.g., the failure to show in the drawings each feature specified in the claims, namely, the mobile vehicle, the shiftable transmission, the friction clutch, the inch pedal, the distance sensor, the electronic control unit and the service brake. All of the raised drawing objections are believed to be overcome by the requested drawing amendments accompanying the attached Submission. If any further figures or amendments to the drawings of this application is believed necessary, the Examiner is invited to contact the undersigned representative of the Applicant to discuss the same.

With respect to the two references apparently missing from the Information Disclosure Statement accompanying this filing, please note that a copy of all twenty (20) cited references accompanied the Information Disclosure Statement, as witnessed by the attached copy of the return postcard. In any event, enclosed are additional copies of the two missing citations along with form PTO/SB/08a which again lists these two previously forwarded citations. The Applicant requests that the two references be considered in this application as these two references were timely made of record.

The specification is objected to for the reasons noted in the official action. The above requested specification amendment is believed to overcome all of the raised informalities concerning this case. If any further amendment to the specification is believed necessary, the Examiner is invited to contact the undersigned representative of the Applicant to discuss the same.

Claims 5-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly amended, by the above claim amendments, and the presently pending claims are now believed to

particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections.

Claims 5-8 are rejected, under 35 U.S.C. § 102, as being anticipated by Hoeftling '136. The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

As the Examiner is aware, in order to support an anticipation rejection under 35 U.S.C. § 102, the cited reference must disclose each and every limitation of the presently claimed invention. Specifically, Hoeftling '136 discloses an electrohydraulic control device for selectively controlling the pressure of a transmission clutch and engine speed to reduce drive train torque. Observing FIG. 1 of Hoeftling '136, a transmission control module 134 receives the operator control signal and responsively controls the engagement of a predetermined transmission clutch to reduce the transmitted torque from the transmission 108.

In particular the right hand pedal 142 in Hoeftling '136 has a maximum and a minimum position and produces an operator control signal via a rotary sensor in response to a pedal position to modulate the transmission clutch pressure. While it is true, and known in the art, that such a pedal may have a fully elevated position, (representing 0% reduction of the transmission clutch engagement) as well as a fully depressed position representing 100% reduction of the transmission clutch engagement) there is no accounting in known systems such as Hoeftling '136 for changes in the transmission and control components which can cause discrepancies between the pedal position and the rotary pedal position sensor. In other words, transmission break-in and wear can lead to the 0-100% range of transmission clutch reduction not corresponding to the fully elevated and fully depressed positions of the pedal. Obviously, where such error is occurring, the error will be compounded with respect to a service brake which is implemented at the pedal position corresponding to the 100% range, but not where the actual 100% reduction of the transmission clutch force is occurring.

The presently claimed invention is distinct from that of the applied reference in that the claims specifically recite that the final positions of the inch pedal are calibrated in the electronic control unit to directly correspond to the 0% and 100% characteristic line inch effect. Specifically, the present invention involves the electronic adjustment of the inch pedal to normalize (or "zero") the 0% and 100% such that the distance sensor need not be mechanically adjusted. Therefore, any unwanted mechanical adjustment of the distance sensor, or the transmission gearing due to wear and tear on the vehicle is electronically compensated at start up of the vehicle as explained at para. [012]

In order to be able to attribute the starting and ending signals of the distance sensor in the electric control unit, the distance sensor is preferably adjusted electronically when first starting up the vehicle. For this, the adjusting process is started via the electronic control unit, thereafter the inch pedal is completely pushed down and is then returned slowly into the starting position. When moving the inch pedal back slowly, the valued supplied by the distance sensor are preferably also measured in order to exclude possible incorrect signals, e.g., caused by loose gears. The final positions of the inch pedal are then allocated in the electronic control unit to the characteristic line 0% and 100% inch effect. This eliminates mechanical adjustment of the distance sensor entirely. Thus it is no longer possible that the friction clutch can be damaged by incorrect adjustment of the distance sensor.

Such an advantage is not in any way taught, suggested and/or disclosed in Hoefling '136, which as disclosed in column 3, lines 45-54, relates to the known aspect of merely representing the operator's desired clutch control via the rotary sensor and uncalibrated pedal depression.

The presently claimed invention specifically recites this distinction in claim 5, wherein it is specifically recited that "... a starting position and an end position of the inch pedal are detected by the electronic control device, and allocated to an inch characteristic line ...". This active calibration feature of the presently claimed invention as determined by the electronic

control device is not disclosed, taught or suggested by the cited Hoeftling `146 reference which, as discussed at column 3, lines 48-50 merely receives an uncalibrated pedal position from the rotary sensor, “. . .the electronic transmission control module adjusts the selected direction clutch pressure proportionally”. In other words, no accommodation is made in Hoeftling `146, nor any other known reference to ensure that the entire range of the transmission clutch force remains within the actuation range of the pedal.

Nonetheless, to further define this distinguishing feature, the Applicant has further amended claim 5 to recite “at vehicle start-up the starting position and the end position of the inch pedal are allocated in the electronic control unit to the characteristic line of a 0% and 100% inch effect to eliminate mechanical adjustment of the distance sensor”. The Applicant, therefore, respectfully submits that the normalizing or calibration of the presently claimed invention is distinct and undisclosed by any from any disclosure, suggestion or teaching of the cited reference. As such, the Applicant respectfully requests withdrawal of the raised anticipatory rejection.

In addition the Applicant has added new claim 10 which includes the feature and subject matter of claim 8, “wherein the electronic control unit determines the function of the pedal path at which a service brake is activated and the vehicle is braked, a braking time is determined by measuring a motion change of the vehicle and stored in the electronic control unit”. As explained in the Applicant’s disclosure at paragraph [014], this feature of the present invention permits a comparison of the minimal actuating force of the clutch at a known point with the inch pedal function so that the inch pedal position at which the service brake is activated can be determined by the electronic control unit. The Applicant has made a thorough review of the applied Hoeftling `146 reference and although arguably the service brakes in Hoeftling `146 are modulated in response to the pedal position, the Applicant can find no disclosure, teaching or suggestion of the electronic control determining the specific function

where the service brake is actuated, nor the evaluation of such a feature where a braking time is discerned according to the motion change of the vehicle. Thus, new claim 10 is also believed to be allowable in view of Hoefling `146.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised anticipation rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Hoefling `146 reference, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised anticipation rejection should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

10/523,320

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. Daniels', written in a cursive style.

Scott A. Daniels, Reg. No. 42,462

Customer No. 020210

Davis & Bujold, P.L.L.C.

112 Pleasant Street

Concord, NH 03301-2931

Telephone 603-226-7490

Facsimile 603-226-7499

E-mail: patent@davisandbujold.com